

Work Order ID 93219***93219***

Page 1

November-15-12 9:51:04 AM

Item ID: D2010-103

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Mirror Arm, 500

Stop

NS2

Start Date: 11/15/12 Start Qty: 6.00

6

Cust Item ID:

Required Date: 11/23/12 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: ML5Date: 12-11-14

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
100		0.00							
100	NC BRAKE								
Brake NC	Memo	0.00							
Brake NC	Punch per Dwg. D2010-103-T1 and Spec Control Dwg D2727 Identify as D2010-103								
110		0.00							
110	Small Fab								
Small Fab	Memo	0.00							
Small Fab	1- Bend as per Dwg D2010 using bending Jig D2010-103T2 2- Deburr ends								
120		0.00							
120	Small Fab								
Small Fab	Memo	0.00							
Small Fab	1-flare before installing plug as per dwg D2010 2-Install D2057 plug as per Dwg D2010								

6 φ FF 13-05-15

6 φ FF 13-05-15

6 φ FF 13-05-15

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other			
Part No. _____											
NCR No. _____											
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending		Bend		Grain		Ovalized		Pressure/Forced			
Centre Not Concentric to O/S		BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure			
Cracks		Broken/Damaged		Inspection Incomplete		Part Incorrect		Weld			
Crushed/Crimped.		Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled			
Cuffs		Contamination		Maintenance		Part Moved					
Heat Treat		Countersink		Mislabeled		Positioned Wrong					
Inspection Strip in Tube		Cut Too Short		Misread		Power Loss/Surge					
Ripples in Bend		Drill Holes		Offset							
Torque Waves in Extrusion		Drawing		Out of Calibration							
Turning Sequence		Finish		Out of Sequence							
Wave/Twist in Tube		Folio		Outside Dimensions							

Work Order ID 93219***93219***

Page 2

November-15-12 9:51:04 AM

Item ID: D2010-103

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Mirror Arm, 500

Stop

NS2

Start Date: 11/15/12 Start Qty: 6.00

6

Cust Item ID:

Required Date: 11/23/12 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

130

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00


 13-5-22

140

140

Powdercoat

Powder Coating

Black Sandtex(Ref:4.3.5.7) per QSI005 4.3

0.00

Memo

 8:30
 9:00

0.00

OVEN TEMPERATURE:

320°F

6x 1 ml 13/05/27

W123480

150

150

QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

6x 1 ml 13/05/27

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order:		DISPOSITION			AGAINST DEPARTMENT/PROCESS														
Part No. _____ NCR No. _____		Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/>	Quality <input type="checkbox"/>	Other <input type="checkbox"/>
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance			Initial Chief Eng	Action Description			Sign & Date	Verification	QC Inspector						
Doc/Data																			
Equip/Tooling																			
Operator																			
Material																			
Setup																			
Other																			
Process																			
Supplier																			
Training																			
Unapproved																			
FAULT CATEGORY																			
Landing Gear				General															
				Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>	Weld <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>								
Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>											
Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Misread <input type="checkbox"/>	Offset <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>	Other <input type="checkbox"/>											
Crushed/Crimped. <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Drawing <input type="checkbox"/>	Finish <input type="checkbox"/>	Folio <input type="checkbox"/>												
Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Drill Holes <input type="checkbox"/>														
Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Drill Holes <input type="checkbox"/>															
Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Mislabeled <input type="checkbox"/>																
Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Mislabeled <input type="checkbox"/>																
Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Mislabeled <input type="checkbox"/>																
Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Mislabeled <input type="checkbox"/>																
Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Mislabeled <input type="checkbox"/>																

Work Order ID 93219***93219***

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Item ID:	D2010-103	Accept	*N900040100*	Setup	Start	*NS1*	
Revision ID:					Stop	*NS2*	
Item Name:	Mirror Arm, 500						
Start Date:	11/15/12	Start Qty: 6.00	*6*	Cust Item ID:			
Required Date:	11/23/12	Req'd Qty: 6.00	*6*	Customer:			
Reference:							
Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* Packaging	Identify as per dwg & Stock Location: <u>ST220</u>	0.00							<u>A6X</u> <u>13-05-30</u>
Packaging	Memo	0.00							
170 *170* QC	QC21- Final Inspection - Work Order Release	0.00							<u>13/5/31</u> <u>MF</u> <u>13-5-30</u>
Quality Control	Memo	0.00							

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General											
Bending	<input type="checkbox"/>	Bend	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Ovalized	<input type="checkbox"/>	Pressure/Forced				
Centre Not Concentric to O/S	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>	Temperature/Cure				
Cracks	<input type="checkbox"/>	Broken/Damaged	<input type="checkbox"/>	Inspection Incomplete	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>	Weld				
Crushed/Crimped.	<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>	Wrong Stock Pulled				
Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Maintenance	<input type="checkbox"/>	Part Moved	<input type="checkbox"/>					
Heat Treat	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Positioned Wrong	<input type="checkbox"/>					
Inspection Strip in Tube	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Misread	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>	Other				
Ripples in Bend	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Offset	<input type="checkbox"/>							
Torque Waves in Extrusion	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Out of Calibration	<input type="checkbox"/>							
Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Sequence	<input type="checkbox"/>							
Wave/Twist in Tube	<input type="checkbox"/>	Folio	<input type="checkbox"/>	Outside Dimensions	<input type="checkbox"/>							

Picklist Print

November-15-12 9:51:03 AM

Page 1

Work Order ID: 93219 **Start Date:** 11/15/12 **Required Date:** 11/23/12
Parent Item: D2010-103 **Start Qty:** 6.00 **Required Qty:** 6.00
Parent Item Name: Mirror Arm, 500
Comments: IPP : F02.08.21 Re-format; Added D2057 KJ/RF
IPP Rev:G 08-05-27 as per ECN1195P DD verified by:EC
IPP Rev:H 08-06-20 rev.D as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.500W.049 304 RD Tube .500 x .049W		Purchased	No			100	f	303.6842	1.5	9.4736844		FF 13-05-15	

Location	Loc Qty	Loc Code
MAT017	303.68421	
111814	2.23	
115010	92.407158	
119087	7.359	
120633	1.688052	
<u>123449</u>	200	

D2057 Plug	Manufactured	No		110	Each	44.0000	1	6	9.4736	FF 13-05-21
---------------	--------------	----	--	-----	------	---------	---	---	--------	-------------

Location	Loc Qty	Loc Code
GA	5	
75070	5	
ST004	39	
71888	2	
<u>86724</u>	13	
<u>90019</u>	24	

1
5

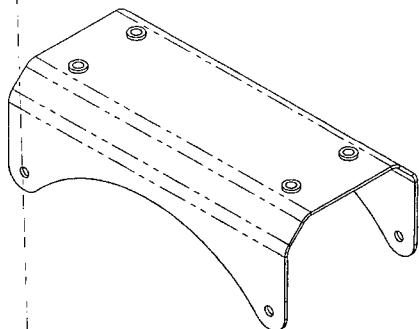
NCR: Yes / No

DQA: _____ Date: _____

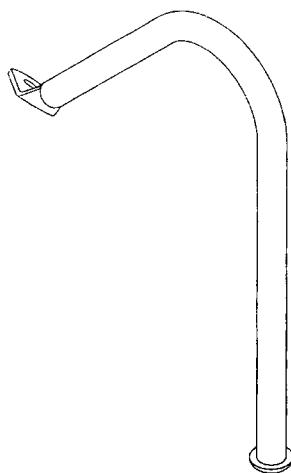
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

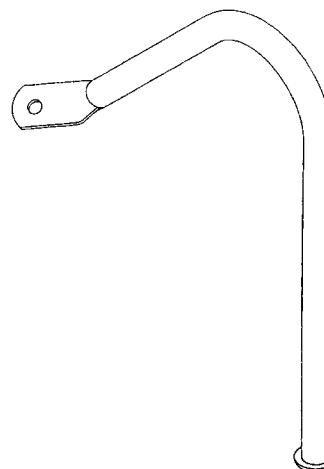
Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS								
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>						
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>						
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>						
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>							
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector				
Doc/Data													
Equip/Tooling													
Operator													
Material													
Setup													
Other													
Process													
Supplier													
Training													
Unapproved													
FAULT CATEGORY													
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions						<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other			



D2010-101 MIRROR BRACKET



D2010-103 ARM



D2010-104 ARM

Shp

R

ENG

UNCONTR

SUBJECT

W

V

NO. 93219 MLJ

12-11-16

RELEASED
(06/19/10)

D	REDRAWN IN SOLIDWORKS; ADD D2010-1F FLAT PATTERN FOR D2010-101 (ZN B7-2); Ø0.500 X 0.049 WALL WAS Ø0.500 X 0.035 WALL (ZN B1-3, B1-4); REASON; TUBING CRACKING DURING SERVICE	PH	08.06.10
C	1.93 WAS 2.00; 0.50 WAS 0.62	KE	97.10.31
B	7.90 WAS 10.90	JB	92.03.17
A	NEW ISSUE	JB	90.12.15
REV.	DESCRIPTION	BY	DATE
DESIGN	JB	DART AEROSPACE LTD	
DRAWN	<i>PY</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO	REV. D
MFG. APPR.		D2010	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		MIRROR BRACKET	NTS
DATE	08.06.10	COPYRIGHT © 1990 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

8

7

6

5

4

3

2

1

A

D

C

B

A

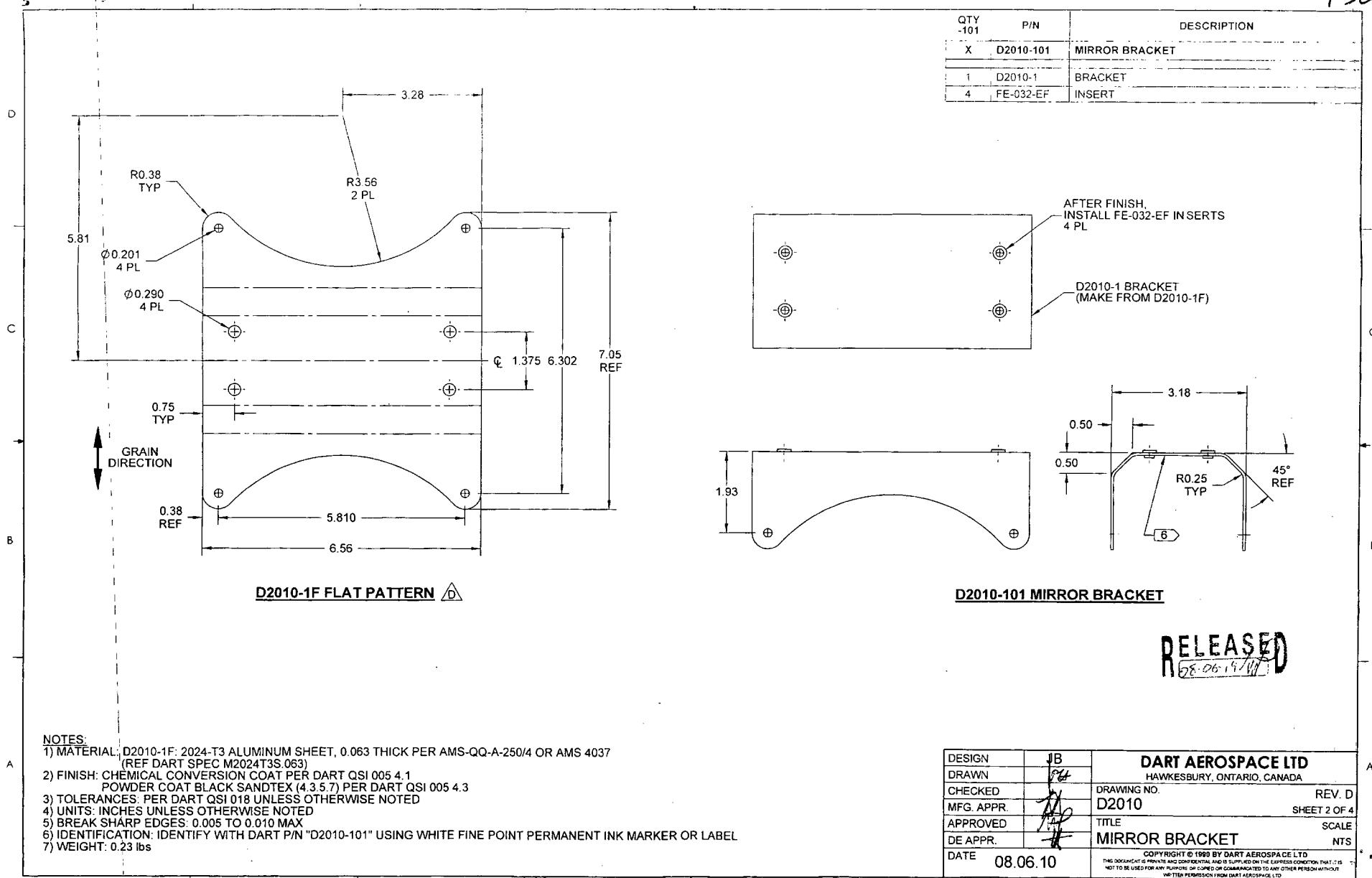
D

C

B

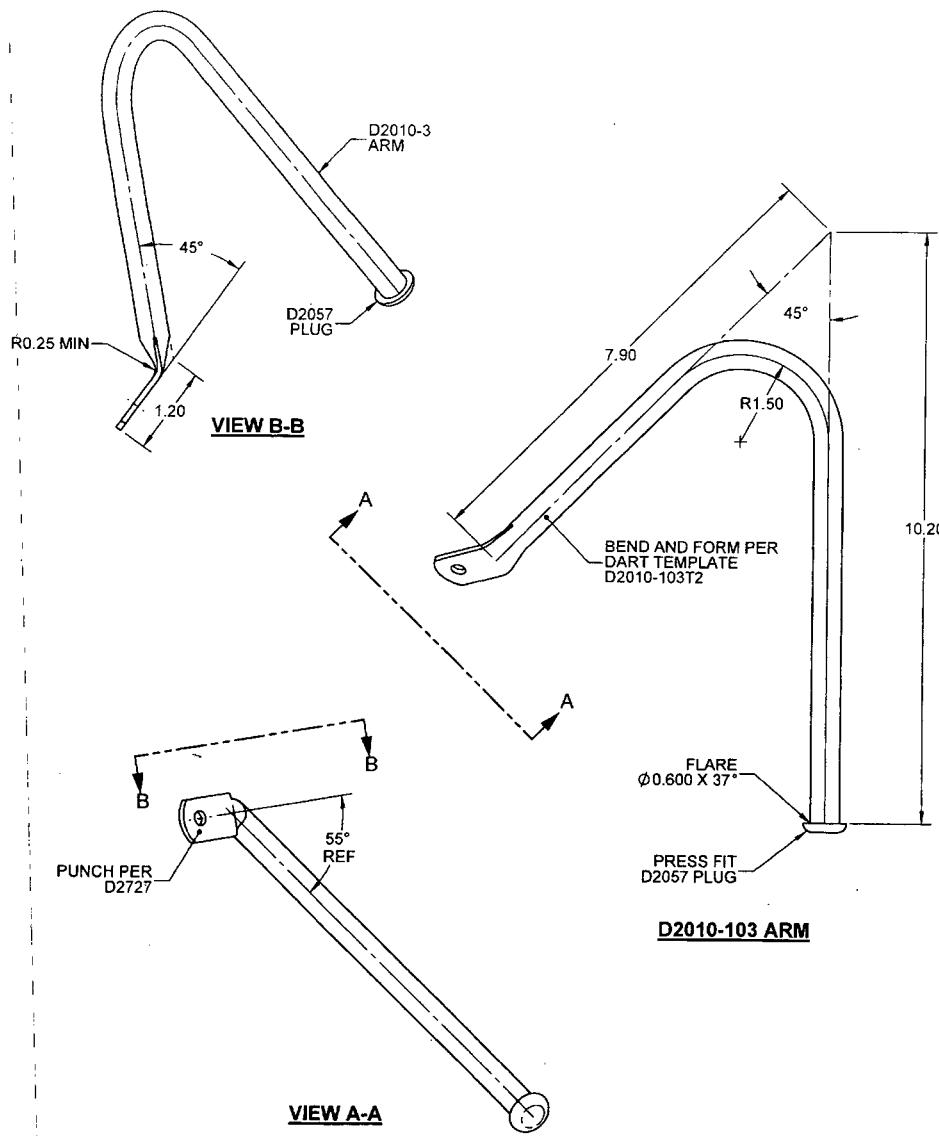
A

93219



93219

QTY	P/N	DESCRIPTION
X	D2010-103	ARM
1	D2010-3	ARM
1	D2057	PLUG

**NOTES:**

- 1) MATERIÅL: D2010-3: AISI 304/316 SS SEAMLESS ROUND TUBING, Ø0.500 X 0.049 WALL
(REF DART SPEC M304TR0.500W.049)
- 2) FINISH: POWDER COAT BLACK SANTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2010-103" USING WHITE FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.34 lbs

DESIGN	JB	DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO.
MFG. APPR.		REV. D
APPROVED		D2010 SHEET 3 OF 4
DE APPR.		TITLE
DATE	08.06.10	SCALE
		MIRROR BRACKET NTS

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8 7 6 5 4 3 2 1

93219

QTY	P/N	DESCRIPTION
X	D2010-104	ARM
1	D2010-4	ARM
1	D2057	PLUG

